



## *X-Plain* *How to Prevent Cancer- Early* *Screening*

### **Reference Summary**

#### **Introduction**

Cancer is a leading cause of death in the United States. About half a million Americans die of cancer every year. Up to two-thirds of all cancer cases could be prevented if people applied all the cancer prevention measures that we know today.

Detecting cancer early can greatly increase your chances of a successful treatment. This reference summary discusses some of the symptoms, risk factors, and screening recommendations for the most common cancers.



#### **What is Cancer?**

The body is made up of very small cells. Normal cells in the body grow and die in a controlled way. Sometimes cells keep dividing and growing without normal control, causing abnormal growth called a tumor. If the tumor does not invade nearby tissues and body parts, it is called a benign tumor, or non-cancerous growth. Benign tumors are rarely life threatening. If the tumor invades and destroys nearby cells, it is called a malignant tumor or cancer.

Cancer may threaten a person's life. Cancerous cells may also spread to different parts of the body through blood vessels and lymph channels. Lymph is a nearly clear fluid produced by the body that drains waste from cells. It travels through vessels and bean-shaped structures called lymph nodes.

Cancers in the body are given names depending on where the cancer originates. Cancer that begins in the lungs will always be called a lung cancer, even if it has spread to another place such as the liver, bones, or brain.

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Although doctors can locate where a cancer begins, the cause of a cancer in a patient cannot usually be identified. Cells contain hereditary or genetic materials called chromosomes. This genetic material controls the growth of the cell. Cancer always arises from changes that occur in these genetic materials. When the genetic material in a cell becomes abnormal, it can lose its ability to control its growth.

These sudden changes in genetic material can occur for a variety of reasons. This tendency may be inherited from parents. Changes in genetic materials may also occur because of exposure to infections, drugs, tobacco, or other factors.

## Breast Cancer

The signs of breast cancer include: A lump in the breast, or a puckering, dimpling or scaling of the breast skin. A bloody or clear discharge from only one nipple may be a symptom of breast cancer, but most discharge, especially if it is from both breasts, and occurs when pressure is applied, is normal. Women should examine their breasts monthly.

The risk factors of breast cancer include:

- Increasing age.
- History of breast, ovarian, endometrial, or colon cancer before menopause in either you or your mother, sister, or daughter.
- Abnormal breast biopsy results.
- First period before age 12 or menopause after age 55.
- Never having children or having your first child after age 30.
- Lengthy exposure to estrogen.

Screening recommendations include:

- Monthly breast self-examination from age 20
- A clinical breast exam every three years from age 20-40 and yearly after 40
- An annual mammogram beginning at age 40

If you have a family history of breast cancer, your physician may want to start mammograms at an earlier age.

Genetic testing can be done in some women to determine if they carry genes that put them at increased risk for developing breast or ovarian cancers.



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If such genes are found, some women decide to have their breasts and ovaries surgically removed to prevent the development of cancer.

## Colorectal Cancer

Digested food gets absorbed in the small intestine. Undigested materials are stored in the colon or large intestine, and are then excreted through the rectum and anus.

Signs of colorectal cancer include blood in the stool, prolonged diarrhea or constipation, abdominal pain or pressure, or any persistent change in bowel habits.

Risk factors of colorectal cancer include:

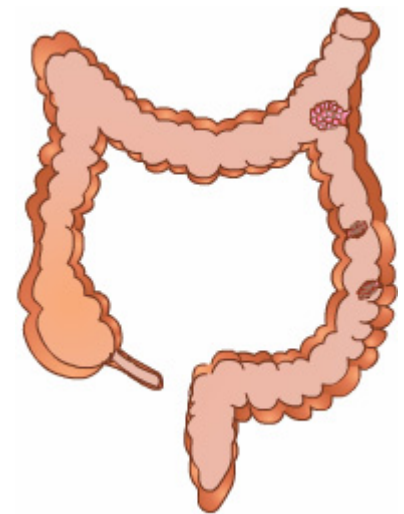
- Personal or family history of colorectal cancer or polyps.
- Inflammatory bowel disease.

Suspected risk factors include:

- Diet high in fat and low in fiber.
- Physical inactivity.
- Cigarette smoking.

Options to screen for colorectal cancer are:

- Stool blood test every year from age 50
- Flexible sigmoidoscopy every five years after age 50
- Other options include colonoscopy every 10 years and double contrast barium enema every 5 to 10 years.



Colon

## Endometrial Cancer

The endometrium is the lining of the uterus. Signs of endometrial cancer include bleeding between menstrual periods or after menopause. Estrogen exposure is the main risk factor. Risk factors include:

- First period before age 12
- Menopause after age 55
- Estrogen replacement therapy without the use of progestin
- Never having children
- History of infertility
- Personal history of breast or ovarian cancer
- Obesity

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To screen for endometrial cancer, the patient should have:

- An annual pelvic exam from age 40
- For women at high risk, a tissue sample from the endometrium should be taken at menopause.

## Cervical Cancer

The cervix is the opening of the uterus. The signs of cervical cancer include bleeding after having sexual relations or between menstrual periods. Risk factors of cervical cancer include:

- First intercourse at an early age
- Multiple sexual partners
- Cigarette smoking



Cervical cancer has been linked to human papilloma virus infections, a sexually transmitted disease.

To screen for cervical cancer you can have an annual Pap test with a pelvic exam from age 18. These tests may be performed earlier if the patient is sexually active. After three or more consecutive exams with normal findings, a physician may choose to do them less frequently.

A vaccine is now available to try to prevent infections with HPV. This vaccine has been able to prevent cases of cervical cancer.

## Prostate Cancer

Signs of prostate cancer include frequent or painful urination, blood in the urine, difficulty in starting or stopping urination, and impotence. These symptoms may result from prostate problems other than cancer, but you should check with your doctor to be sure. Risk factors for prostate cancer include:

- Increasing age
- Family history of prostate cancer
- Race - African-American men have the highest incidence of prostate cancer in the world.
- A high-fat diet is a suspected risk factor.

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To screen for prostate cancer, the patient should have:

- Yearly digital rectal exam after age 50
- Yearly prostate-specific antigen (PSA) blood test after age 50

## Skin Cancer

Skin cancer is a mole that suddenly increases in size, changes color, or becomes ulcerated and bleeds easily.

You can check your body for skin cancer by examining your skin for these signs. Less serious skin cancers may look like a pale, wax like, pearly bump, a red, scaly patch, or an ulcerated sore. Risk factors for skin cancer include:

- Exposure to ultraviolet radiation
- Fair complexion
- Family history
- Occupational exposure to coal tar, pitch, creosote, arsenic, or radium

To screen for skin cancer, the patient should have:

- Monthly self-exam from age 18 on
- A physician should evaluate -Any suspicious-looking mole or sore immediately.

Remember this ABCD rule when evaluating a mole:

- A for Asymmetry
- B for Border irregularity
- C for Color
- D for Diameter

### **Asymmetry**

If one half of a mole does not match the other, it may be cancerous.

### **Border irregularity**

If the edges of a mole are ragged, uneven, or blurred it may be malignant.

### **Color**

If a mole has more than one color or shade, this may also indicate malignancy.



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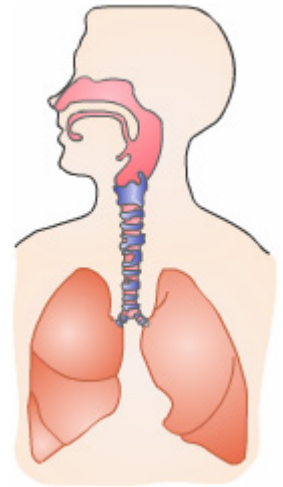
## **Diameter**

If a mole is bigger than the size of a pencil eraser, about 6-mm, or has visibly grown, it may be cancerous.

## **Lung Cancer**

Signs of lung cancer include:

- A persistent cough
- Coughing up blood
- Unusual, unexplained fatigue
- Swelling of the neck and face
- Shortness of breath
- Repeated pneumonia or bronchitis
- Loss of appetite and loss of weight
- Hoarseness, and persistent chest, shoulder, or back pain.



Smoking is by far the leading cause of lung cancer. People who work with asbestos have a higher risk of getting lung cancer. Not smoking is the best way to prevent lung cancer.

## **Testicular Cancer**

Testicular cancer is the most common cancer in young men between the ages of 18 and 35.

Symptoms of testicular cancer include: A change in consistency in the testicles or a small, hard lump that is often painless. Men of all ages, from 18 on, should examine their testicles monthly.

## **Oral Cancer**

Oral cancer usually occurs in people after 40 but it can occur at any age. The signs of oral cancer include white or velvety red patches, lumps or hardening of the tissue. You should examine your mouth monthly, particularly if you smoke, chew or dip tobacco, or drink alcohol.

## **Summary**

Healthy living habits such as eating well, exercising, not smoking, and avoiding sunburns can help prevent up to two thirds of cancers.

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However, sometimes cancer may still occur because of risk factors such as heredity. By learning about the symptoms of cancer and asking for cancer screening tests, you can detect any cancerous growth in its early stages.

Thanks to advances in medical science and technology, cancers in their early stages may be successfully treated. The earlier the cancer is discovered, the greater the chances of a successful treatment.



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